

APPARATUS AND METHOD FOR IDENTIFICATION  
OF A PRIMARY CODE START SYNC POINT FOLLOWING  
A RETURN TO PRIMARY CODE EXECUTION

**Abstract of the Invention**

1 When a PROGRAM CODE START POINT signal is generated in a  
2 target processor during a test procedure after the return  
3 from an interrupt service routine, a sync marker is  
4 generated in a program counter trace stream. The sync  
5 marker includes a plurality of packets, the packets  
6 identifying that the sync marker is has been generated as a  
7 result of the PROGRAM CODE START POINT signal. The program  
8 code start point sync marker identifies the absolute  
9 program counter address at the time of the generation of  
10 the PROGRAM CODE START POINT signal and relates the PROGRAM  
11 CODE START POINT signal sync marker to a timing trace  
12 stream. The PROGRAM CODE START POINT signal is generated  
13 after the instructions are removed from the pipeline  
14 flattener and the first program (primary) code instruction  
15 is removed from the pipeline flattener. The PROGRAM CODE  
16 START POINT signal sync marker alerts the host processor to  
17 the initiation and context of the program code execution.